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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,084	11/04/2003	Scott D. Schwab	0013.0103	4422
63970 7590 05/28/2009 MH2 TECHNOLOGY LAW GROUP (Cust. No. w/NewMarket) 1951 KIDWELL DRIVE SUITE 550 TYSONS CORNER, VA 22182				
EXAMINER				
TOOMER, CEPHIA D				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
05/28/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/701,084

Applicant(s)

SCHWAB ET AL.

Examiner

Cephia D. Toomer

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,7-11,13,14,16-18,23,24,26,27,29-33,35,36,38-42,44,45,47-51,53,54,56-58,60,61,64 and 65 is/are rejected.
- 7) ☒ Claim(s) 62 and 63 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continuation of Disposition of Claims: Claims pending in the application are 1,2,5,7-11,13,14,16-18,23,24,26,27,29-33,35,36,38-42,44,45,47-51,53,54,56-58 and 60-65.

DETAILED ACTION

1. This Office action is in response to the amendment filed July 30, 20February 27, 2009 08 in which claims 1, 24, 26-27 and 29-31 were amended and claims 19 and 59 were canceled.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2,5, 7-11, 13, 14, 16-18, 23, 24, 26,27, 29-33, 35, 36, 38-42, 44, 45, 47-51, 53, 54 and 56-58, 60 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwab (US 5,669,938) in view of Lin (US 6,458,173).

Schwab teaches a fuel composition comprising a major proportion of a hydrocarbon middle distillate fuel (diesel, kerosene, gas oils, jet fuel, etc), about 1 to about 40 vol% water and an emission reducing amount of at least one fuel-soluble

organic nitrate such as 2-ethylhexyl nitrate (see abstract; col. 2, lines 32-39). The organic nitrate includes nitrate esters of substituted aliphatic alcohols. Preferred nitrates are those having up to about 10 carbon atoms (see col. 2, line 55 through col. 3, lines 1-5 and 10-16). The nitrates are present in the fuel composition in an amount from about 500 to about 50,000 ppm (see col. 3, lines 48-55). Other additives may be included within the fuel composition such as corrosion inhibitors; antioxidants, etc (see col. 4, lines 52-60). Also, Schwab teaches that the finished fuel may contain minor amounts of non-hydrocarbonaceous fuels or blending components such as alcohols and dialkyl ethers (see col. 2, lines 4-10). Schwab teaches the limitations of the claims other than the differences that are discussed below.

In the first aspect, Schwab differs from the claims in that he does not exemplify a fuel composition wherein the oxygenate is blended with the fuel. However, no unobviousness is seen in this difference because Schwab teaches that the finished fuels may contain blending agents such as dialkyl ethers. This teaching suggests the combination.

In the second aspect, Schwab differs from the claims in that he does not specifically teach the methods of claims 1, 23, 32, 41 and 50. However, no unobviousness is seen in this difference because it is well settled that the discovery of a previously unappreciated property of a prior art composition does not render the old composition patentable to the discoverer. Thus, claiming of a new use, new function or unknown property does not necessarily make the claim patentable, especially in view of

the prior art composition being used in the same environment as the claimed fuel composition.

Schwab differs from the claims in that he does not specifically teach the claimed sulfur content of the fuel. However, Lin teaches that it is known to use diesel fuels that contain 10 ppm or less of sulfur (see col. 10, lines 5-9).

It would have been obvious to one of ordinary skill in the art to use low sulfur fuels because Schwab is concerned about exhaust emissions and specifically teaches that if auxiliary liquid fuels are used with the main fuel that those fuels be desulfurized and Lin teaches that low sulfur diesel fuels meet this requirement.

4. Claims 1, 2, 5, 7, 8, 10, 11, 13, 14, 16, 17, 19, 23, 24, 26, 27, 29, 30, 32, 33, 35, 36, 38, 39, 41, 42, 44, 45, 47, 48, 50, 51, 53, 54, 56 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeh (US 6,447,557).

Yeh teaches a diesel fuel composition wherein the fuel is an ultra-low sulfur diesel having no more than 50 ppm sulfur (see abstract). This teaching suggests a sulfur content of 8 ppm or less. Yeh teaches that the addition of at least one of an alcohol, ketone or mixture thereof to the ultra-low sulfur diesel reduces particulate emissions (see col. 3, lines 18-22). Such an alcohol includes pentanol, hexanol, 2-ethylhexanol and 2-propylheptanol and represents Applicant's hydrocarbon additive and oxygenate (see claim 9). Yeh teaches one or more conventional additive may be present in the fuel composition (see col. 5, lines 21-31). With respect to the peroxide content of the fuel composition, it would be reasonable to expect that the fuel

composition meets this limitation because Yeh teaches a similar fuel with the claimed additives.

Yeh fails to teach the method of reducing the amount of peroxides in a middle distillate fuel. However, it would be reasonable to expect that the fuel composition of Yeh would reduce the amount of peroxides because Yeh teaches a low sulfur fuel wherein an oxygenate and the claimed hydrocarbon additive may be present. The benefit of reducing the amount of peroxides would have naturally flowed from the suggestions of Yeh. *Ex parte Obiaya*, 227 USPQ 58 (BPAI 1985) (holding that the recognition of another advantage flowing naturally from following the suggestion of the prior art cannot be the basis for patentability when the difference would otherwise be obvious).

Yeh differs from the claims in that he does not specifically teach the methods of claims 1, 23, 32, 41 and 50. However, no unobviousness is seen in this difference because it is well settled that the discovery of a previously unappreciated property of a prior art composition does not render the old composition patentable to the discoverer. Thus, claiming of a new use, new function or unknown property does not necessarily make the claim patentable, especially in view of the prior art composition being used in the same environment as the claimed fuel composition.

With respect to claim 19, the language adapted to be combined is intended use and has not been given patentable weight.

2. Claims 1, 2, 5, 7-11, 13, 14, 16-18, 23, 24, 26, 27, 29-33, 35, 36, 38-42, 44, 45, 47-51, 53, 54, 56-58, 60, 61, 64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beimesch (US 6,080,212).

Beimesch teaches a low sulfur diesel fuel wherein the sulfur content is less than 0.05% by weight (see abstract; col. 1, lines 11-20). This teaching suggests the claimed sulfur content. The fuel comprises a combination of at least two esters as set forth at col. 2, line 34 through col. 4, lines 1-41. These compounds represent Applicant's oxygenate. The fuel composition may contain up to about 1000 ppm cetane improves such as 2-ethylhexyl nitrate, nitro or nitroso compounds (see col. 4, lines 51-58). These compounds represent the hydrocarbon additive. The composition may also contain polyethylene glycol ethers (see col. 5, lines 5-10). These compounds also may represent the claimed oxygenate. Beimesch teaches that the fuel may contain conventional additives (see col. 4, line 51-col. 5, lines 1-26). Beimesch teaches the limitations of the claims other than the differences that are discussed below.

Beimesch differs from the claims in that he does not specifically teach the methods of claims 1, 23, 32, 41 and 50. However, no unobviousness is seen in this difference because it is well settled that the discovery of a previously unappreciated property of a prior art composition does not render the old composition patentable to the discoverer. Thus, claiming of a new use, new function or unknown property does not necessarily make the claim patentable, especially in view of the prior art composition being used in the same environment as the claimed fuel composition.

3. Applicant's arguments filed have been fully considered but they are not persuasive.

Applicant argues that Schwab teaches away from the claimed invention because Schwab teaches that it may be preferred to employ the nitrate ester in combination with at least one hydrocarbyl peroxide.

The examiner recognizes that in a preferred embodiment of Schwab such a combination may be present in the fuel composition. However, it is well settled that a reference is considered for all that it teaches and is not limited to the examples and preferred embodiments therein. Schwab teaches that the fuel composition may be prepared in the absence of the hydrocarbyl peroxides and thus meets the limitations of the claims.

Applicant argues that Lin does not teach reducing peroxides.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that Yeh and Beimesch do not teach the claimed invention because Yeh and Beimesch do not teach any particular peroxide content in their disclosed fuel compositions, much less a peroxide content of less than about 8 ppm.

Yeh and Beimesch teach fuel compositions that are similar to those of the present invention wherein an oxygenate and a hydrocarbon additive are present. If the

claimed invention reduces the amount of peroxides in the fuel of the present invention, then it would be more than reasonable to expect that the fuel compositions of Yeh and Beimesch would also reduce the amount of peroxides in their fuels.

Analysis of whether the subject matter of a claim would be obvious need not seek out precise teaching directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ. *KSR Int'l v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-1741 (2007), quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006), see also *DyStar Textilfarben GmbH and Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1361 (Fed. Cir. 2006) ("The motivation need not be found in the references sought to be combined, but may be found in any number of sources, including common knowledge, the prior art as a whole, or the nature of the problem itself."); *In re Bozek*, 416 F.2d 1385, 1390 (CCPA 1969)(Having established that this knowledge was in the art, the examiner could then properly rely, as put forth by the solicitor, on a conclusion of obviousness 'from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference.'").

4. Claims 62 and 63 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record fails to teach or suggest the claimed oxygenate compounds.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 571-272-1126. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cephia D. Toomer/
Primary Examiner
Art Unit 1797